

105.2 Serum Materials (frozen, liquid, and lyophilized forms)

These SRMs serve a variety of clinical measurement needs. SRM 909b is a lyophilized human serum for use in determining specified constituents. SRM 927d is a bovine serum albumin in a sterile 7% solution for use in the calibration and standardization of procedures to analyze total serum protein. SRM 956b is a frozen human serum for use in the calibration and standardization of procedures for the determination of specific electrolytes in either diluted or undiluted human serum or plasma. SRM 965 is a frozen human serum for evaluating the accuracy of procedures used to determine glucose in human serum and to validate secondary reference materials. SRM 968c is a lyophilized human serum for validating methods used to determine fat-soluble vitamins, carotenoids, and cholesterol in human serum and plasma. SRM 970 is a frozen human serum for validating methods for determining ascorbic acid in human serum and similar matrices. SRM 1951a is a frozen human serum for evaluating the accuracy of clinical procedures for the determination of total cholesterol, HDL-cholesterol, LDL-cholesterol and triglycerides (triglycerides and total glyceride species). SRM 1951b is a frozen human serum for evaluating the accuracy of clinical procedures for the determination of total cholesterol. SRM 1589a is a freeze-dried human serum for evaluating PCB congeners, chlorinated pesticides and total cholesterol in human serum and similar matrices. SRM 2921 is a human cardiac troponin complex. SRM 2921 is primarily intended for use in calibrating clinical procedures and devices for the determination of cardiac troponin I (cTnI) in human serum. It can also be used for value-assignment of calibrators and control materials.

[For further information see SP 260-83](#)

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PLEASE NOTE: The table
For specific values and uncertainties, the certificate is the only official source.

SRM Description		Unit Size	Analyte Concentration (in mmol/L)	
			909b-1	909b-2
909b Human Serum	909b-1: 3 bottles	Calcium	2.218	3.532
		Chloride	89.11	119.43
	909b-2: 3 bottles	Cholesterol	3.787	6.084
		Creatinine	0.05618	0.4674
		Lithium	0.6145	2.600
		Magnesium	0.7634	1.918
		Potassium	3.424	6.278
		Sodium	120.76	141.0
		Total Glycerides	0.949	1.529
		Glycerides	0.804	1.271
		Urea	5.51	30.75
		Uric Acid	0.277	0.733

927d	Bovine Serum Albumin (7% Solution)	10 ampoules	BSA Concentration 65.41 mg/L				
			Level I	Level II	Level III		
956b	Electrolytes in Frozen Human Serum	Level I: 2 ampoules Level II: 2 ampoules Level III: 2 ampoules	Calcium	2.949	2.456	1.974	
			Ionized Calcium	1.71	1.37	1.09	
			Lithium	1.920	1.207	0.486	
			Magnesium	1.522	0.994	0.458	
			Potassium	5.973	3.983	1.987	
			Sodium	120.1	141	160.7	
			Level I	Level II	Level III	Level IV	
965a	Glucose in Frozen Human Serum	Level I: 2 ampoules Level II: 2 ampoules Level III: 2 ampoules Level IV: 2 ampoules	Glucose	1.918	4.357	6.777	16.24
968c	Fat-Soluble Vitamins, Carotenoids, and Cholesterol in Human Serum			Level I*	Level II*		
		<i>trans</i> -Retinol		2.93	1.69		
		*-Tocopherol		0.325	1.31		
		(-Tocopherol)		9.36	3.73		
		α -Tocopherol		17.3	39.0		
		<i>trans</i> - β -Carotene		0.293	0.728		
		Total β -Carotene		0.319	0.812		
		Cholesterol		3454	4318		
			Level I*	Level II*			

970	Ascorbic Acid in Frozen Human Serum	Level I; 2 ampoules Level II; 2 ampoules	Ascorbic Acid	10.07	30.52	
				Level I	Level II	
1589a	PCB's Pesticides, and Dioxins/Furans in Human Serum	Level I; 5 bottles	Total Cholesterol	157.76 mg/dL		
				Level I	Level II	Level III
1951a	Lipids in Frozen Human Serum	Level I; 2 bottles Level II; 2 bottles	Total Cholesterol	4.7109	7.1554	
			Total Glycerides	1.1357	1.9477	
			Triglycerides Only	1.0053	1.7462	
			Glucose	5.047	5.072	
1951b	Lipids in Frozen Human Serum	Level I; 2 bottles Level II; 2 bottles	Total Cholesterol	4.804	6.895	
			Total Glycerides	121.3	264.6	
			Triglycerides Only	107.0	239.1	
1955	Homocysteine and Folate in Frozen Human Serum	Level I; 1 bottle Level II; 1 bottle	Homocysteine (μmol/L)	3.98	8.85	17.7
		Level III; 1 bottle	5-Methyltetrahydrofolic Acid (nmol/L)	4.26	9.73	37.1
			Folic Acid (nmol)	0.49	1.05	1.07
2921	Human Cardiac Troponin Complex	5 vials	cTnI	31.2	**	
			cTnT	36.9	**	
			cTnC	24.2	**	

*Analyte Concentrations are expressed in μmol/L

** Concentrations are expressed in mg/L